

Claims:

1. A noise canceling circuit, comprising:

a reference voltage generation means for generating a reference voltage;

a bias current generation means for generating a bias current determining an operating current;

an error amplifier means for amplifying an error voltage for said reference voltage;

a voltage-current output means for generating an output of a power circuit; and

an output voltage-dividing means for detecting a fluctuation of the output voltage, wherein:

said error amplifier means comprises an input part consisting of a pair of the 1-type semiconductor elements and a load part consisting of a pair of the 2-type semiconductor elements; a noise suppression part consisting of a pair of the 1-type semiconductor elements is disposed between said input part and said load part; and the pair of the elements of said noise suppressing part is constructed with a different size to thereby control the power voltage dependency of the output voltage.

2. A noise canceling circuit, comprising:

a reference voltage generation means for generating a reference voltage;

a bias current generation means for generating a bias current determining an operating current;

an error amplifier means for amplifying an error voltage for said reference voltage;

a voltage-current output means for generating an output of a power circuit;

an output voltage-dividing means for detecting a fluctuation of the output voltage; and

a canceling signal generation means containing at least one

capacitance component, wherein:

a first input terminal of said error amplifier means is connected to said reference voltage generation means; a second input terminal of the error amplifier means is connected to said output voltage-dividing means; said second input terminal is connected to said canceling signal generation means; the canceling signal generation means voltage-divides a noise signal by said capacitance component and a resistance component of the output voltage-dividing means, and advances the phase of the noise signal; the error amplifier means comprises an input part consisting of a pair of the 1-type semiconductor elements and a load part consisting of a pair of the 2-type semiconductor elements; a noise suppression part consisting of a pair of the 1-type semiconductor elements is disposed between said input part and said load part; and the pair of the elements of said noise suppression part is constructed in different size to thereby control the power voltage dependency of the output voltage.

3. A noise canceling circuit according to Claims 1 - 2, wherein the absolute values of a voltage dependency coefficient of the output voltage from the reference voltage generation means and the error amplifier means are -60dB or less for a power voltage change of 1V, the difference between the absolute values of the power voltage is -80dB or less, and the polarity of the power voltage dependency coefficient of the reference voltage generation means is opposite to the polarity of the power voltage dependency coefficient of the error amplifier means.

4. A noise canceling circuit according to Claims 1 - 3, wherein a capacitance of a capacitance component of the canceling signal generation circuit is a subtle capacitance of 0.1pF - 0.001pF.

5. A noise canceling circuit according to Claims 1 - 4, wherein the bias current generation circuit is omitted, and the reference

voltage generation circuit also serves as the bias current generation circuit.